WHAT IS CLAIMED:

1. A method of determining a motion vector of a block of at least of part of a video frame with respect to a reference video frame, the reference video frame comprising a plurality of pixels, the method comprising:

defining an interpolated version of the reference video frame, comprised of the pixels and interpolated pixels, the interpolated pixels being generated by interpolation of at least two pixels, the interpolated pixels being located adjacent to at least one of the pixels being exploited for the interpolation;

defining a region within the interpolated reference video frame, the dimension of the region being determined by a predetermined maximal length of the motion vector;

calculating mathematical norms of the block at a plurality of positions defined by the region in the interpolated version of the reference video frame, wherein the interpolated pixels are calculated when a norm calculation in such a position requires the interpolated pixels; and

selecting the motion vector having the lowest norm.

2. The method of claim 2, wherein calculation of mathematical norms for positions for which part of the block is not situated in the reference video frame are excluded from calculation; and wherein the method does not determine mathematical norms when the block of the reference video frame which must be compared with the block contains transparent pixels.

3. The method of Claim 2, wherein calculation of the interpolated pixels comprises calculating all the interpolated pixels that can be determined with the pixels if these interpolated pixels are not yet available.

4. An apparatus for determining a motion vector of a block of at least of part of a video frame with respect to a reference video frame, the reference video frame comprised of pixels, the apparatus comprising:

circuitry being adapted for generating interpolated pixels by interpolation of at least two pixels of the reference video frame, wherein the interpolated pixels being located adjacent to at least one of the pixels being exploited for the interpolation, the

interpolated pixels and pixels of the reference video frame define an interpolated version of the reference video frame; and

circuitry being adapted for calculating mathematical norms of the block at a plurality of positions defined by a region within the interpolated video frame, the dimension of the region being determined by a predetermined maximal length of the motion vector, wherein the interpolated pixels are calculated when a norm calculation in such a position requires the interpolated pixels.

5. A system for determining a motion vector of a block of at least of part of a video frame with respect to a reference video frame, the reference video frame comprising a plurality of pixels, the method comprising:

means for defining an interpolated version of the reference video frame, comprised of the pixels and interpolated pixels, the interpolated pixels being generated by interpolation of at least two pixels, the interpolated pixels being located adjacent to at least one of the pixels being exploited for the interpolation;

means for defining a region within the interpolated reference video frame, the dimension of the region being determined by a predetermined maximal length of the motion vector;

means for calculating mathematical norms of the block at a plurality of positions defined by the region in the interpolated version of the reference video frame, wherein the interpolated pixels are calculated when a norm calculation in such a position requires the interpolated pixels; and

means for selecting the motion vector having the lowest norm.

6. The system of Claim 5, wherein the means for calculation of mathematical norms for positions for which part of the block is not situated in the reference video frame are excluded; and wherein the method does not determine mathematical norms when the block of the reference video frame which must be compared with the block contains transparent pixels.

7. A program storage device storing instructions that when executed performs the method of determining a motion vector of a block of at least of part of a video frame with

respect to a reference video frame, the reference video frame comprising a plurality of pixels, the method comprising:

defining an interpolated version of the reference video frame, comprised of the pixels and interpolated pixels, the interpolated pixels being generated by interpolation of at least two pixels, the interpolated pixels being located adjacent to at least one of the pixels being exploited for the interpolation;

defining a region within the interpolated reference video frame, the dimension of the region being determined by a predetermined maximal length of the motion vector;

calculating mathematical norms of the block at a plurality of positions defined by the region in the interpolated version of the reference video frame, wherein the interpolated pixels are calculated when a norm calculation in such a position requires the interpolated pixels; and

selecting the motion vector having the lowest norm.

8. The program storage device of Claim 7, wherein calculation of mathematical norms for positions for which part of the block is not situated in the reference video frame are excluded from calculation; and wherein the method does not determine mathematical norms when the block of the reference video frame which must be compared with the block contains transparent pixels.

9. The program storage device of Claim 7, wherein calculation of the interpolated pixels comprises calculating all the interpolated pixels that can be determined with the pixels if these interpolated pixels are not yet available.